# XS650F
# 1979 SERVICE DATA



| MODEL – IBM I.D. NUMBER | XS650F 2F0 |
|---|---|
| Initial Engine Number/Frame Number | 2F0-020101 / 2F0-020101 |
| Basic Color(s) | Cobalt Blue |
| Fuel Type/Fuel Tank Capacity/Reserve Capacity | Regular / 15 Lit. (4 Gal.) / 2.5 Lit. (0.6 Gal.) |
| Dry Vehicle Weight | 210 kg (463 lbs.) |
| **ENGINE TYPE** | 4 Stroke, SOHC, Air-Cooled |
| Bore/Stroke/Number Cylinders/Displacement (cc) | 75mm / 74mm / 2 / 654cc |
| Compression Ratio/Compress. Pressure min ~ max | 8.5:1 / 9.5 ~ 11.5 kg/cm$^2$ |
| Piston Skirt Clearance new/max | 0.050 ~ 0.055mm / 0.1mm |
| Ring End Gap top/2nd/3rd | 0.2 ~ 0.4mm / 0.2 ~ 0.4mm 0.3 ~ 0.9mm |
| Valve Clearance (cold) Intake/Exhaust | 0.06mm / 0.15mm |
| Oil Pressure hot/rpm | φ |
| Oiling System | Wet Sump |
| Capacity Dry | 2500cc |
| Oil and Filter Change | 2000cc |
| Oil Change | 2000cc |
| Lubricant Temp above 5°C (40°F) | Yamalube 4° or SAE 20W40 SE |
| Below 15°C (60°F) | Yamalube 4° or SAE 20W40 SE |
| **AUTOLUBE** – Mix Stroke/Color Code | φ |
| Minimum Output @ 200 cycles | φ |
| Maximum Output @ 200 cycles | φ |
| **CARBURETOR** – Mfr./Type/I.D. Number | Mikuni BS38 / 2F000 |
| Main Jet/Pilot Jet | 135 / 27.5 |
| Needle Jet/Jet Needle Clip Position | Z-2 / 502-3 |
| Slide Cutaway or Throttle Valve | 120 |
| Float Level | 24 ± 2.5mm |
| Idle RPM | 1200 |
| CO % @ Idle (Diagnostic Use Only) | 3 ± 2% |
| **SUSPENSION** | |
| Front Forks Oil Type Level/Qty | 10 wt. Fork Oil* / φ 164 ~ 172cc |
| Gas Pressure | φ |
| Spring Length Std | 482mm |
| Monoshock Oil Type/Qty | φ |
| Gas Pressure | φ |
| Minimum Brake Lining Thickness | Front 6.0mm Rear 7.0mm |
| Tire Size Nominal Pressure | F 3.50H19/1.6 kg/cm$^2$ 22 psi R 4.00H18/2.0kg/cm$^2$ 28 psi |
| **TRANSMISSION** – Oil Type/Qty Chg/Qty Reassemble | See ENGINE Lubricant |
| Primary Drive Type/Teeth/Ratio | Spur Gear / 72 27 2.666 |
| Secondary Drive Type/Teeth/Chain | Chain / 34 17 / DID530HOS 104L |
| Clutch Friction Plate Thickness Std ~ min | 3.0 ~ 2.7mm |
| Clutch Spring Length Std ~ min | 34.6 33.6mm |
| Middle Gear Case Capacity | φ |
| Final Gear Case Capacity | φ |
| Gear Case Lubricant Temp above 5°C (40°F) | φ |
| Temp below 15°C (60°F) | φ |
| All Weather Conditions | φ |

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|---|---|---|
| **CHARGING SYSTEM** | | A.C. Generator / 3 Phase / Full Wave |
| Battery: Model / Spec. Grav. / Chg. Rate | | Yuasa YB14L-A2 (12V14AH) / 1.28 / 1.4A |
| Maximum Output | | 14V11A @ 2000 rpm |
| TROUBLESHOOTING | | |
| Field Coil Color Code / Ω | | Rotor: Grn~Blk/5.25Ω±10% Stator: Wht~Wht/0.46Ω±10% |
| Charge Coil Color Code / Ω | | ϕ |
| **IGNITION SYSTEM** | | Battery and Coil |
| Ignition Timing | | 15° Mark |
| | | Std: 15° @ 1200 rpm Adv: 40° @ 3000 rpm |
| Spark Plug Type | | NGK B7ES or Champion N7Y |
| Spark Plug Gap / Torque / Cap Ω | | 0.7 ~ 0.8mm / 2.0 m-kg / 10K Ω |
| Point Gap / Condenser Capacitance | | 0.3 ~ 0.4mm / 0.22 μF ± 10% |
| TROUBLESHOOTING | | |
| Ignition Coil Test Gap / Primary Ω / Secondary Ω | | 6.0mm / 3.9 Ω ± 10% / 8.0K Ω ± 20% |
| Pulse Coil or Pick-up Coil Color Code / Ω | | ϕ |
| Source Coil Color Code / Ω | | ϕ |
| **LIGHTING SYSTEM** | | |
| Headlight / Taillight / Signal Rating | | 12V50-40W / 12V27-8W / 12V27W |
| TROUBLESHOOTING | | |
| Lighting Coil Color Code / Ω | | ϕ |
| **TORQUE VALUES** | | |
| Front Axle Nut | | 14 x 1.5 10.7 m-kg |
| Front Axle Holder Nut | | 8 x 1.25 2.0 m-kg |
| Rear Axle Nut | | 18 x 1.5 15.0 m-kg |
| Rear Axle Pinch Bolt | | ϕ |
| Clutch Nut | | 18 x 1.0 8.0 m-kg |
| Drain Plug | | 30 x 1.5 4.2 m-kg |
| Cylinder Head Cover | | ϕ |
| Cylinder Head | | 6 x 1.0 0.9 m-kg 8 x 1.25 2.* m-kg |
| | | Cap Nut 10 x 1.25 3.7 m-kg |
| Engine Mounting Bolts | Engine, Upper | 8 x 1.25 1.8 m-kg 10 x 1.25 3.0 m-kg |
| | Engine, Front | 10 x 1.25 4.6 m-kg |
| | Engine, Rear | 10 x 1.25 4.0 m-kg |
| | Rear, Lower | 10 x 1.25 4.6 m-kg |
| | Engine, Lower | 10 x 1.25 4.6 m-kg |

ϕ Does Not Apply to This Model

* Available From Yamaha Parts Distributors, Inc